# Article information:

In-process monitoring in laser grooving with line-shaped femtosecond pulses using optical coherence tomography
<https://light-am.com//article/doi/10.37188/lam.2022.033>

# Article summary:

1. Line-shaped beams formed by cylindrical lenses and diffractive optical elements (DOEs) have been used to increase the speed of laser grooving, scribing, cleaving, and other processes.

2. Post-processing using scanning electron microscopy (SEM) and atomic force microscopy (AFM) is often used to optimize processing parameters for desired structural depth.

3. In-process monitoring of laser processing has been demonstrated using transmission optical microscopy, laser-scanning confocal microscopy (LCM), white-light interferometry (WLI), optical coherence tomography (OCT), ultrasound and X-ray tomography, and magnetic resonance imaging (MRI).

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article provides a comprehensive overview of the use of line-shaped femtosecond pulses generated by a computer-generated hologram (CGH) displayed on a spatial light modulator (SLM) for in-process monitoring in laser grooving with line-shaped femtosecond pulses using optical coherence tomography. The article is well written and provides an accurate description of the process as well as its potential advantages over traditional post-processing methods such as scanning electron microscopy (SEM) and atomic force microscopy (AFM). The article also provides an overview of other methods for measuring the depth of the processed structure such as laser-scanning confocal microscopy (LCM), white-light interferometry (WLI), optical coherence tomography (OCT), ultrasound and X-ray tomography, and magnetic resonance imaging (MRI).

The article does not appear to be biased or one sided in its reporting. It presents both sides equally by providing an overview of both traditional post processing methods as well as in process monitoring techniques. Furthermore, it does not appear to contain any promotional content or partiality towards any particular method or technique. The article also notes possible risks associated with each method which is important for readers to consider when deciding which method is best suited for their needs.

In conclusion, this article appears to be trustworthy and reliable due to its balanced reporting style and lack of bias or promotional content.

# Topics for further research:

* Laser Grooving with Femtosecond Pulses
* Optical Coherence Tomography for In-Process Monitoring
* Scanning Electron Microscopy for Post-Processing
* Atomic Force Microscopy for Post-Processing
* Laser-Scanning Confocal Microscopy
* White-Light Interferometry

# Report location:

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